

Science

Time: 3hrs

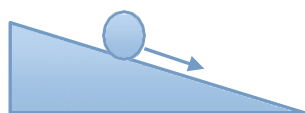
M. M: 90

General Instructions:

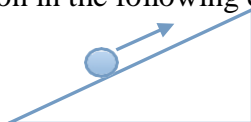
1. There are two sections in this paper. Section A contains Q 1-24 & section B contains Q25-36.
2. Marks are indicated against each question.
3. Read all questions carefully.
4. All questions are compulsory.

Section A

- | | | |
|---|--|---|
| 1 | Why is an animal cell regarded as eukaryotic cell? | 1 |
| 2 | Give one method which we can adapt to use inexhaustible resources. | 1 |
| 3 | Give the direction of force of friction in the following cases. | 1 |



(i)



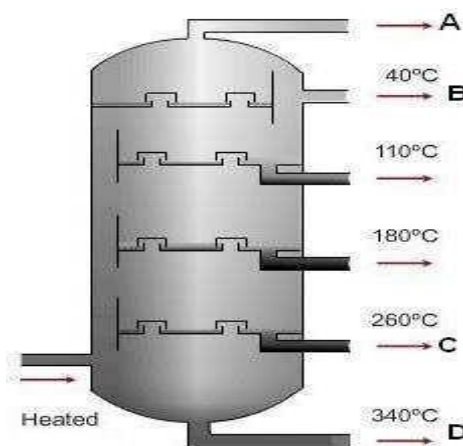
(ii)

(Arrows indicate the movement of the ball on the inclined plane)

- | | | |
|----|---|---|
| 4 | Name the following | 2 |
| | a) A female hormone | |
| | b) Male gamete in human beings | |
| | c) Process of formation of zygote | |
| | d) Part in the female reproductive system where implantation takes place. | |
| 5 | Compare any two properties of Rayon and Acrylic. | 2 |
| 6 | Explain what happens to meteors when they enter into the Earth's atmosphere. | 2 |
| 7 | Discuss the various shapes of cells found in human body and write one example for each (any three shapes) | 3 |
| 8 | Differentiate between thermoplastic and thermosetting polymers on the basis of : | 3 |
| | a) nature | |
| | b) effect of high temperature | |
| | c) toughness | |
| 9 | With the help of diagram, explain the causes of friction. | 3 |
| 10 | Explain the process of binary fission in amoeba with the help of well labeled diagram. | 3 |

11 a) Write the principle involved in the given process.

3



b) Label the parts A,B,C and D in the above diagram

12 Give reason for the following:

3

- a) Heavy suitcases are provided with small wheels.
- b) The body of a racing car is streamlined.
- c) Thick grooves are made in the tyres of heavy vehicles.

13 Explain how does the development of an embryo take place in a hen?

3

14 A string vibrates 60 times in 2 seconds. Find the frequency and time period of vibrations of the string. Will this sound produced be audible to human ears or not ? Give reason to support your answer.

3

15 a) What is carbonization.

3

b) Write conditions required for destructive distillation.

c) Give the relevant scientific term for the following:

i) A product used to make candles.

ii) A fuel used in aero planes.

16 List any three changes that take place in females during adolescence.

3

17 a) What are sex chromosomes ?

3

b) How is the sex determined in the human beings? Explain with the help of a flow chart.

18 Rohan read about the devastating effect of Oil Spills in the ocean and he wants to know more about it. Help him by answering the questions given below:

3

a) What is an oil spill?

b) Give any two ill effects of oil spill.

c) How can it be prevented?

19

5

a) What is noise pollution?

b) Name any two sources of noise pollution.

c) Suggest two ways to reduce noise pollution

20 a) Differentiate between plant cell and animal cell on the basis of

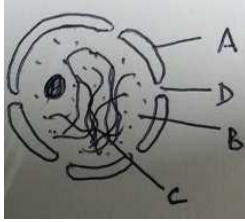
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i) Presence of cell wall

ii) Size of the vacuole

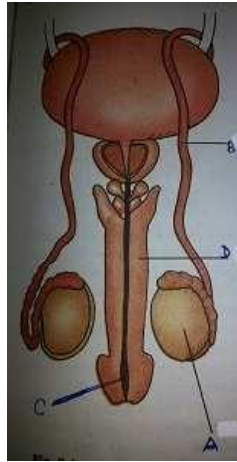
iii) Presence of plastids

b) Label the parts A,B,C & D in the given diagram



21 Observe the diagram of the male reproductive system and answer the following

5



- Label the parts A,B,C & D
- Write the function of part B and C.
- What is the role of the hormone secreted by the part 'A'.

22 a) Complete the table

S.NO	Gland	Hormone	Effect
1	Thyroid		
2		Adrenaline	
3			Lowers blood glucose level

b) Give reason for the following:

- We should take iodized salt in our diet.
- Females can reproduce only during some years of their life span.

23 Justify the statements given below:

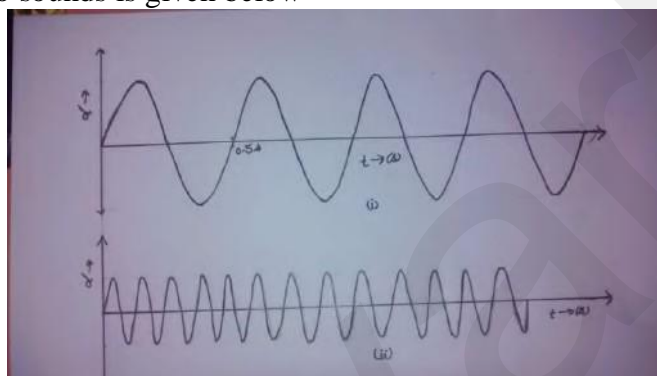
- Dust bin bags are black in colour.
- We should throw waste such as plastics in blue bin.
- Nylon clothes are not preferred in summers.
- Countries having good resource of petroleum are economically stable.
- We should not sleep in a closed room near the fire place.

24 Observe the given diagram of human ear .Label the parts A,B,C,D,E and write the role played by each part in the process of hearing.

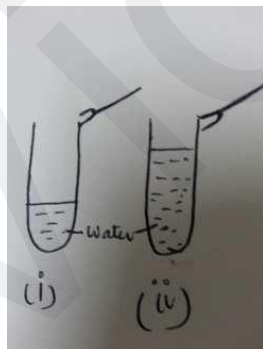


Section B

- 25 Name a commonly used dye/stain used for staining to observe the cell under a microscope 1
- 26 Justify the statement 'pituitary gland is often regarded as the master gland of the body.' 1
- 27 Why is the use of biogas becoming popular in villages? 1
- 28 Ramu keeps his car engine in good condition by bringing his car to the service station regularly. Which value of Ramu is depicted by his action 1
- 29 How do we protect our environment by selling plastic materials and old newspapers to garbage collectors. 1
- 30 A box of 5 kg is lying on the table. When a force of 50N is applied on it, the box just starts to slide on the table. What is the magnitude and direction of the force of static friction. 1
- 31 The wave forms of two sounds is given below 1



- In which case will the sound be shriller and why?
- 32 The same sound produced by a source is heard through water and air by two person Ram and Shyam. Who will hear this sound first and why? 1
- 33 Water is filled in two glass tumblers up to different levels. Each of them is struck with a metal spoon. In which case will the sound be shriller and why? 2



- 34 A poster showed a slogan 'Use of 4 R's' in our daily life. What do you understand with this slogan 1
- 35 Kamla is a maid who works in Ravi's house. She is planning to marry her daughter who is just 15 years of age Ravi warns her that what she is doing is legally and ethically wrong as her daughter is not physically and mentally mature getting married. Which value of Ravi is highlighted by this act? 2
- 36 Write any two ways in which, HIV may be transferred to a healthy person from an infected person 2

Science

Date:

Class: VIII



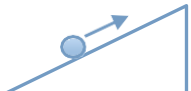
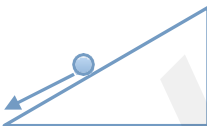
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General Instructions:

1. There are two sections in this paper. Section A contains Q 1-24 & section B contains Q25-36.
2. Marks are indicated against each question.
3. Read all questions carefully.
4. All questions are compulsory.

Section A

1	Why is an animal cell regarded as eukaryotic cell? It has a well defined nucleus and nuclear membrane.	1
2	Give one method which we can adapt to use inexhaustible resources. Solar panels	1
3	Give the direction of force of friction in the following cases. <div style="display: flex; justify-content: space-around; align-items: flex-start;"> <div style="text-align: center;">  <p>Ans- </p> <p>(i)</p> </div> <div style="text-align: center;">   <p>(ii)</p> </div> </div>	1
4	Name the following a) A female hormone Progesterone b) Male gamete in human beings Sperm c) Process of formation of zygote fertilization d) Part in the female reproductive system where implantation takes place. Uterus	2
5	Compare any two properties of Rayon and Acrylic. Rayon is soft and like silk while acrylic is crisp and like wool.	2
6	Explain what happens to meteors when they enter into the Earth's atmosphere. Due to high friction (1), great amount of heat is generated because of which the meteor catches fire. (1)	2
7	Discuss the various shapes of cells found in human body and write one example each (any three shapes) any 3 shapes). ½ * 6 Oval/spherical - RBC/egg Elongated and branched - nerve cell Amoeboid - WBC Spindle - muscle cell	3

8	Differentiate between thermoplastic and thermosetting polymers on the basis of a) Effect of heat Thermoplastic melt quickly whereas thermosetting plastic melt at high temp. 1 b) Nature Thermoplastic are soft whereas thermosetting plastic are hard. 1 c) Toughness Thermoplastic are less tough whereas thermosetting plastic are tougher with high	3
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	tensile strength 1	
9	With the help of diagram, explain the causes of friction. Diag showing interlocking 1 Rough surface due to irregularities 1 Hills and valleys lock and resist movement 1	3
10	Explain the process of binary fission in amoeba with the help of well labeled diagram. Nucleus elongated (1/2)cytoplasm divides (1/2),daughter cells (2)	3
11	a) Write the principle involved in the given process. Components are separated having difference in their boiling point b) Label the parts A,B,C and D in the above diagram a= petroleum gas ,b= naphtha/Petrol, c=Diesel/Lubricating Oil, d=bitumin	3
12	Give reason for the followings a) Heavy suitcases are provided with small wheels. a. to reduce friction(rolling friction is less than sliding friction) b) The body of a racing car is streamlined. b. streamlined bodies suffer less friction. c) Thick grooves are made in the tyres of heavy vehicles. c) To increase friction because of which the grip on the roads increases.	3
13	Explain how does the development of an embryo takes place in a hen ? Internal fertilization takes place(1) Layers are laid before the laying of egg(1) Hens sits to provide warmth(1)	3
14	A string vibrates 60 times in 2seconds. Find the frequency and time period of vibration of the string .Will this sound produced be audible to human ears or not ?Give reason to your answer. Ans. $f=60/2=30$ Hz (1) $T=1/f$ $T=1/30=0.03s$ (1) The sound will be audible to humans as it is in the range of human ears(20 hz -20000hz) (1)	3
15	a) What is carbonization. Formation of fossils b) Write conditions required for destructive distillation. Break down of crude oil in the absence of air c)Name the following i)A product used to make candles.- Wax ii)A fuel used in aero planes.- white petrol	3
16	List any three changes that take place in females during adolescence. Dev. of breasts Onset of menstrual cycle Pubic and armpit hairs	3
17	a)What are the sex chromosomes ? 23rd pair of chrms responsible for deciding the sex of human 1 b) How is the sex determined in the human beings? Explain with the help of a flow chart. X Y chr $\frac{1}{2}$ Gametes X type eggs , X and Y type sperm $\frac{1}{2}$ Male XY $\frac{1}{2}$ female XX $\frac{1}{2}$	3
18	Rohan read about the devastating effect of Oil Spills in the ocean and he wants to know more about it. Help him by answering the questions given below: a) What is oil spill? Caused due to leakage of oil from ships carrying oil a) Give any two ill effects of oil spill. Causes damage to aquatic life b) How can it be prevented?	3

	Removing old torn out ships, care of the weather conditions of oceans before sailing																	
19	<p>a) What is noise pollution? Definition (1)</p> <p>b) Name any two sources of noise pollution. Any two(traffic, loudspeakers) (1+1)</p> <p>c) Suggest two ways to reduce noise pollution. i.plantation along the road sides ii.noise producing factories should be set out of the city(1+1)</p>	5																
20	<p>a) Differentiate between plant cell and animal cell on the basis of i) Presence of cell wall- plant cell has cell wall 1</p> <p>ii)Size of the vacuole- prominent vacuole in plant cell ,small insignificant in animal cell iii) Presence of plastids -plastids found in plant cell absent in animal cell</p> <p>b) Label the parts a,b,c,d in the given diagram</p> <p>A=nucl memb,B=nucleoplasm,C=chromatin, D=nuclear pore ½ each</p>	5																
21	<p>Observe the diagram of the male reproductive system and answer the following</p> <p>i) Label parts A,B,C & D A=testis B=spremduct, C=Penis, D=Epididymus (1/2 each)</p> <p>ii) Write the function of part B and C. B=transfer of sperm from testis to urethra (1 each) C=release of sperm into the body.</p> <p>iii) What is the role of the hormone secreted by the part ‘A’? Development of secondary sexual characters and production of sperms(1/2each)</p>	5																
22	<p>Complete the table</p> <table><tr><th>S.NO</th><th>Gland</th><th>Hormone</th><th>Effect</th></tr><tr><td>1</td><td>Thyroid</td><td>thyroxine</td><td>metabolism</td></tr><tr><td>2</td><td>adrenal</td><td>Adrenaline</td><td>Prepares the body to face emergency situation</td></tr><tr><td>3</td><td>pancreas</td><td>insulin</td><td>Lowers blood glucose level</td></tr></table> <p>b) Give reason for the following:: i) We should take iodized salt in our diet. Responsible for the proper functioning of thyroid gland, lower level leads to goiter. ii) - Females can reproduce only during some years of their life span-reproductive life is limited between Menarche and Menopause.</p>	S.NO	Gland	Hormone	Effect	1	Thyroid	thyroxine	metabolism	2	adrenal	Adrenaline	Prepares the body to face emergency situation	3	pancreas	insulin	Lowers blood glucose level	5
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1	Thyroid	thyroxine	metabolism															
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23	<p>Justify the statements given below:</p> <p>a) Dust bin bags are black in colour. So that they cannot be reused, not to be used for storing eatables</p> <p>b) We should throw waste such as plastics in blue bin. Re used</p> <p>c) Nylon clothes are not preferred in summers. Do not absorb sweat</p> <p>d) Countries having good resource of petroleum are economically stable. Black gold</p> <p>e) We should not sleep in a closed room near the fire place. Carbon monoxide poisoning</p>	5																
24	<p>a) Observe the given diagram of human ear .Label the parts A,B,C,D,E and write the role played by each part in the process of hearing.</p> <p>A=pina, B=audotary cannal, C=eardrum , D=cochlea, E=auditory nerve (1/2each)</p>	5																

	<p>b) Write the functions of the labeled parts also.</p> <p>A= collects sound from surroundings B=sound passes through it C= vibrates and send vibration to middle ear. D=sends signals to brain E= converts sound in to electrical signals</p>	
	Section B	
25	<p>Name a commonly used dye/stain used for staining to observe the cell under a microscope</p> <p>Methylene blue/ Safranin (any one)</p>	1
26	<p>Justify the statement 'pituitary gland is often regarded as the master gland of the body.'</p> <p>Controls all other glands and secretes growth hormones</p>	1
27	<p>Why is the use of biogas becoming popular in villages.</p> <p>Less polluting , waste material is used, economic</p>	1
28	<p>Ramu keeps his car engine in good condition by bringing his car to service station regularly.</p> <p>Which value of Ramu is depicted by his action</p> <p>Less polluting/ concern for environment</p>	1
29	<p>How do we protect our environment by selling plastic materials and old newspapers to garbage collectors?</p> <p>Save trees</p>	1
30	<p>A box of 5 kg is lying on the table .When a force of 50N is applied on it; the box just starts to slide on the table. What is the magnitude and direction of the force of static friction?</p> <p>Frictional force=50 N, opposite to motion</p>	1
31	<p>The wave forms of two sounds is given below</p> <p>i) In which case the sound will be shriller.</p> <p>Case ii because the frequency is more</p>	1
32	<p>The same sound produced by a source is heard through water and air by two people Ram and Shyam. Who will hear this sound first and why?</p> <p>Ram, speed of sound is more in water.</p>	2
33	<p>Water is filled in two glass tumblers up to different levels. Each of them is struck with a metal spoon. In which case the sound will be shriller and why?</p> <p>In fig. ii the sound will be shriller because the pitch of the sound increases with the level of water.</p>	1
34	<p>A poster showed a slogan 'Use of 4 R's' in our daily life. What do you understand with this slogan</p> <p>Reduce reuse recover recycle</p>	2
35	<p>Kamla is a maid who works in Ravi's house .She is planning to marry her daughter who is just 15 years of age Ravi warns her that what she is doing is legally and ethically wrong as her daughter is not physically and mentally mature getting married. Which value of Ravi is highlighted by this act?</p> <p>18 for girls and 21 for boys Value- concern/legally aware/thoughtful</p>	2
37	<p>Write any two ways in which, HIV may be transferred to a healthy person from infected person</p> <p>Infected syringes and needles From pregnant mother to her baby Blood transfusion (any two 1+1)</p>	2